

# **Texas Water Development Board Water For Texas 2017 Conference**

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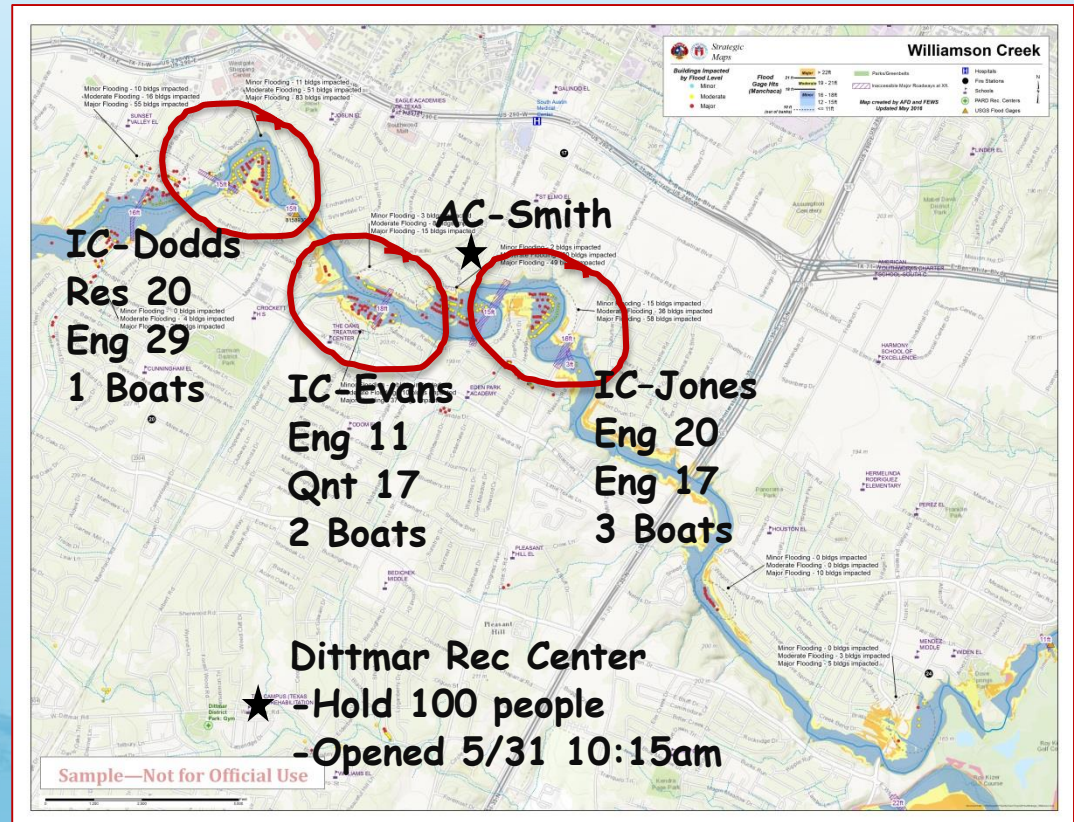
TWDB 2017 Conference Austin, Texas 24 January 2017

Acknowledgements: Austin Fire Department

# Local/Regional Maps for First Response

## Strategic Flood Maps

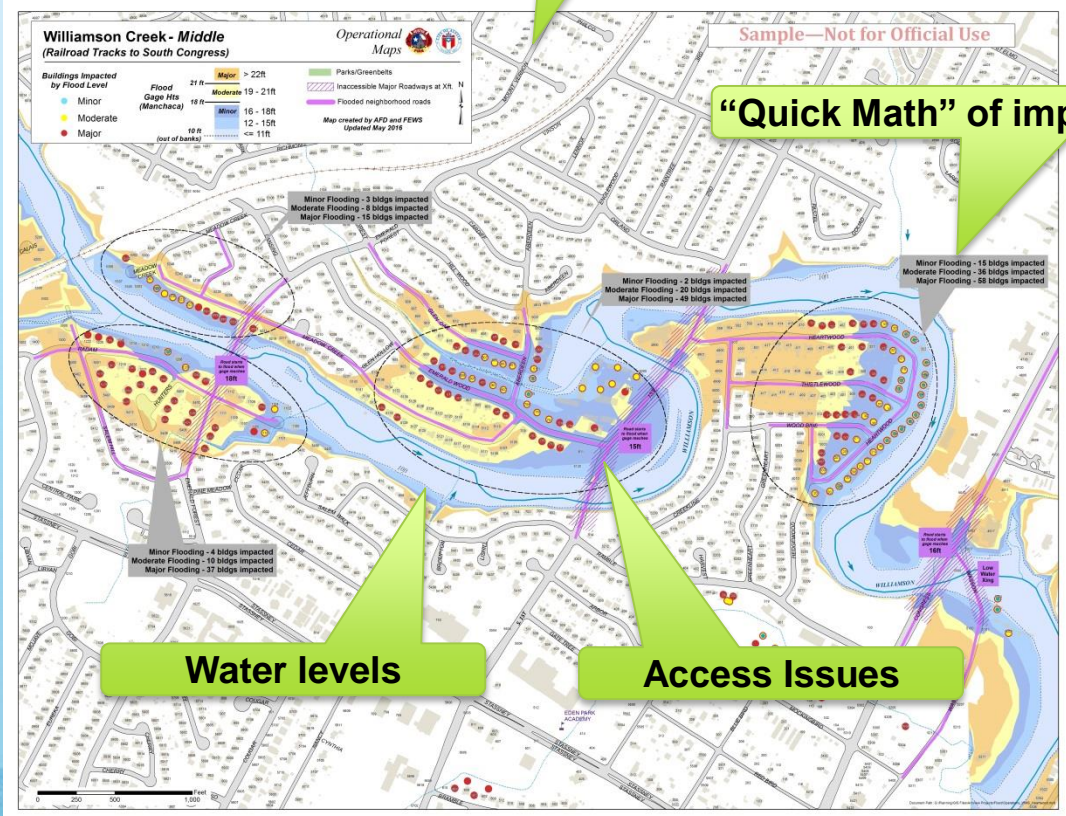
- Used at Emergency Operations Center
- Overview map of entire area
- Identifies scope/magnitude of overall problem
- Used to keep track of several area commands, groups of units



# Local/Regional Maps for First Response

## Operation Flood Maps

- Incident/Area Command
- Flood info at an area command level
- Laminated for recording situational awareness
- Able to log where units are assigned, where people have been rescued, what is remaining/what needs to be focused on

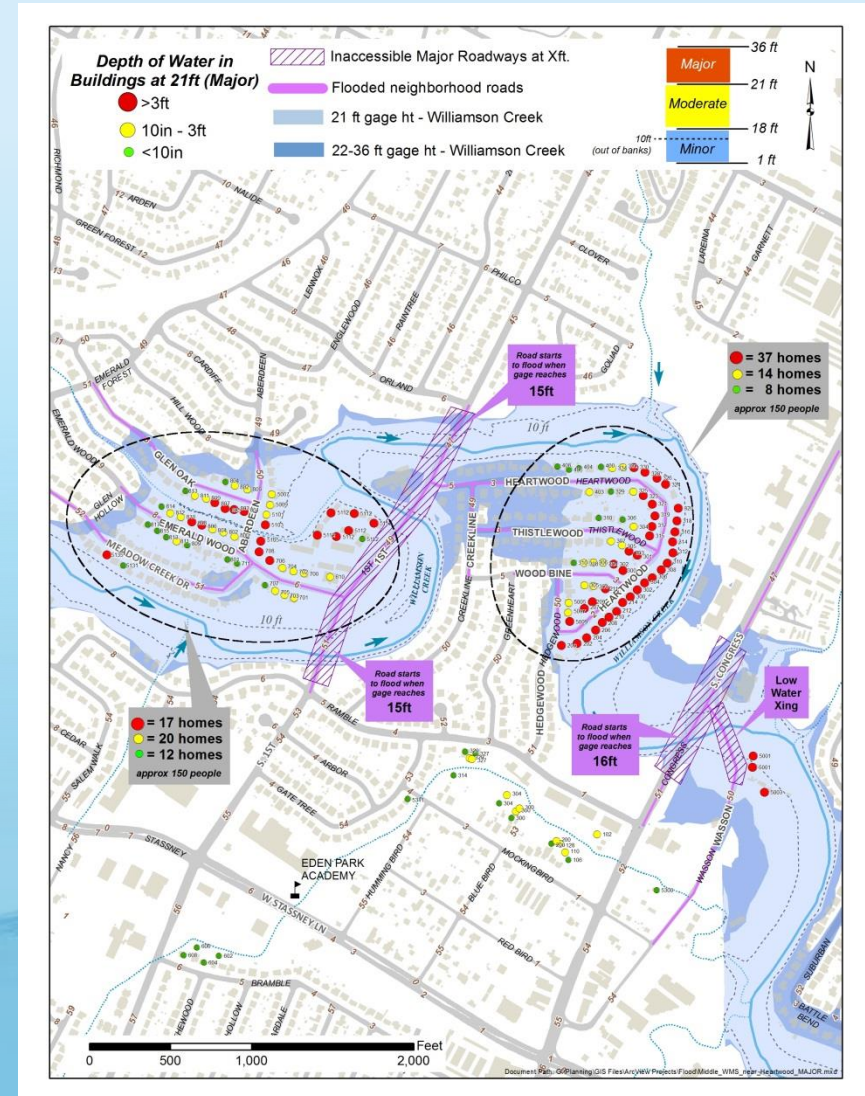




# Local/Regional Maps for First Response

## Pre-planning Flood Maps

- Used “on a blue sky sunny day” for fire unit planning (first response)
- Detailed information about flood area (primarily from local floodplain mgrs)
- Ability to drive the streets, review what the flood could do to the neighborhood, where to stage during an event, etc
- Format where flood plain managers could transfer detailed engineering info to the fire units
- Format where Fire Units can log information specific to a response in this area (ex: Staging area, shelters/rec centers, target hazards)



# Building Local/Regional Flood Maps

## Workflow for Local Map Development

- **Where are the creeks/streams/rivers at high risk for flooding?**
  - Conduct threat and risk analysis
  - Identify vulnerable neighborhoods, critical infrastructure, flood prone roadways
- **Develop “strategic” view of entire creek/stream/river**
  - Provides overview of entire scope of flood threat
  - Identify evacuation corridors
  - Conduct tabletop exercises to verify map accuracy at each level of development
- **Divide strategic maps into “operational” areas**
  - Typical methodology for dividing an emergency incident
  - Determine possible staging areas, access and egress points
  - Obtain floodplain data (where available)
  - Provide relevant gauge data and stage heights
- **Divide “operational” maps into task level planning maps**
  - Local knowledge and experience on flood characteristics
  - Predetermine on-scene task level actions

# Map Characteristics

## Is It Useful?

- **Does it answer the questions asked by TDEM?**
  - ✓ What is the water level now?
  - ✓ What is the predicted final water level?
  - ✓ When do we expect it to get to that level?
- **Does it use universally understood symbols?**
  - ✓ Is the information understood with a quick glance?
- **Does it require technical expertise to use?**
- **Can TDEM create a plan from the information or map?**
  - ✓ Do we protect in place or evacuate?
  - ✓ How will we evacuate citizens from the risk zone?
  - ✓ How much time do we have?
  - ✓ Where will the citizens be sheltered?

# Map Characteristics

## Is It Useable?

- **Is it always available?**
  - ✓ Where is it?
  - ✓ Can the link be found easily?
- **Does it take constant review to stay proficient?**
  - ✓ Has it changed from the last time it was reviewed?
- **Can anyone gain access?**
  - ✓ Do I need to log in to view?
  - ✓ If electronic, is a logon required?? Password??
- **Can it be easily modified to add changing information?**

# Conclusions

- Any system developed for this purpose would not be very useful.... Unless it were part of a system TDEM, first responders and emergency managers use every day.
- If there is unfamiliarity with a system, even a good one, no one will feel the luxury to use it and explore it when a disaster unfolds and chaos descends.
- Only an operational, helpful, daily system will be one that TDEM, first responders and emergency managers use in a disaster environment.